

ABSTRACT

A silicon nitride wear resistant member is composed of a ceramic sintered body containing 55 to 75 mass% of silicon nitride, 12 to 28 mass% of silicon carbide, 3 to 15 mass% of at least one element selected from the group consisting of Mo, W, Ta, and Nb in terms of silicide thereof, and 5 to 15 mass% of grain boundary phase composed of a rare earth element-Si-Al-O-N, the wear resistant member having an electrical resistance of 10^7 to 10^4 $\Omega\cdot\text{cm}$, a porosity of 1% or less, and a three point bending strength of 900 MPa or more. The wear resistant member has a predetermined electric resistance (electro-conductivity) in addition to the high strength and toughness inherent in silicon nitride per se, especially has a high sliding characteristic. Also, a method of manufacturing the wear resistant member is provided.